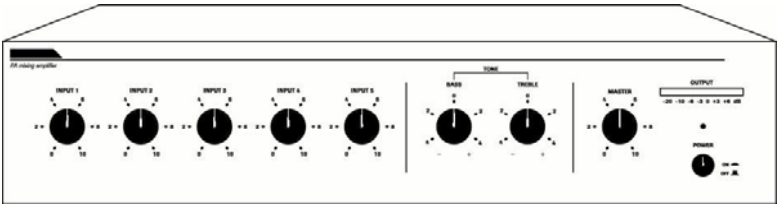
MANUALE UTENTE – *USER'S MANUAL*

Amplificatore PA Integrato
PA Mixing Amplifier
AMP30XL / AMP60XL / AMP120XL



PROEL

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1. IMPORTANT SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electric shock do not remove cover (or back panel). No user serviceable parts inside. Refer servicing to qualified personnel only.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user of the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance. Please carefully read the owner's manual.

INSTRUCTIONS:

All safety and operating instructions should be read before the product is operated.

Retain these instructions:
All safety and operating instructions should be retained for future reference.
This owner's manual should be considered as a part of the product and it must accompany it every time, and delivered to the new user when this product is sold. In this way the new owner will be aware of all the installations, operating and safety instructions.

Heed all warnings:
All warnings on the product and in owner's manual should be adhered to**.**
Heed all warnings.

Follow all instructions:
All operating and user's instructions must be followed.

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Sentences preceded by ⚠ symbol contain important safety instruction. Please read it carefully.

DETAILED SAFETY INSTRUCTIONS.

Water and moisture:

This apparatus should not be used near water (i.e. bathtub, kitchen sink, swimming pools, etc.)

Ventilation:

This apparatus should be placed in a way that his position doesn't interfere with correct ventilation. This unit, for example, should not be placed on a bed, sofa cover o similar surfaces that could cover ventilation openings, or placed in a built-in installation, such a bookcase or a cabinet that could block air flow trough ventilation openings.

Heat:

This apparatus should be placed away from heat sources, like radiators, heat registers, stoves or other products (including amplifiers) that produce heat.

Power sources:

- This apparatus should be connected only to power source type specified in this owner's manual or on the unit.
- If the supplied AC power cable plug is different from wall socket, please contact an electrician to change the AC power plug.

Grounding or Polarization:

- All precautions must be observed in order to avoid grounding or polarization defeating.
- Unit metal parts are grounded through the AC power cord.
- If the AC power outlet doesn't have grounding, consult an electrician for outlet grounding.

Power cord protection:

The power cord should be routed in a way it will not be walked on or pinched by items placed upon or against it, paying particular attention to cords at plugs, convenience receptacles and wall outlet.

Cleaning:

- You can clean the unit with a compressed air flow or a wet cloth.
- Don't clean the unit using solvents like trichloroethylene, thinners, alcohol, or other fluids with very strong volatility and flammability.

Non use periods:

The unit AC power cord should be unplugged from the outlet if it's unused for a long period.

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Objects or liquid entry inside the unit:

Be careful that no objects fall or liquid is spilled inside the unit through ventilation openings.

Safe power line use:

- Keep firmly the plug and the wall outlet while disconnecting the unit from AC power.
- When the unit will not be used for a long period of time, please unplug the power cord from AC power outlet.
- To avoid unit power cord damaging, please don't strain the AC power cable and don't bundle it.
- In order to avoid unit power cord damaging, please be sure that the power cord is not walked on or pinched by heavy objects.

Unit relocation:

Before any unit relocation please control the unit is turned off. The power cord must be unplugged by the wall outlet, and all the connections wires should be disconnected as well.

Don't open this unit:

Don't attempt to open or to repair by yourself this unit. For any problem solution not described in this owner's manual, please refer to qualified personnel only or consult us or your National Distributor. Any improper operation could result in fire or electric shock.

Damages requiring services:

- Don't attempt to do operations not described in this user's manual.
- In the following cases please refer to an authorized maintenance center or skilled personnel:
  - When the unit works improperly or it doesn't work at all.
  - If power cord or plug are damaged.
  - If liquid has spilled, or objects have fallen into the unit.
  - The unit has been exposed to rain.
  - The unit doesn't operate normally o it exhibits a marked change in performance.
  - If the product has dropped or it has been damaged in any way.

Maintenance:

The user shouldn't attempt maintenance operation not described in this user's manual. Every maintenance operation should be done by qualified personnel only.

IMPORTANT SAFETY INSTRUCTIONS:

- Install this unit following owner's manual instructions.
- Don't install, connect or disconnect power supply when the unit is powered, otherwise there's an high risk of electric shock.
- Don't open the unit, there are no user serviceable parts inside.
- If you detect a particular smell from the unit, please immediately turn it off and disconnect the AC power cord.
- Don't block the unit ventilation openings.
- Avoid using this unit in overload for a long period.
- Don't force commands (switches, controls, etc.)

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- To obtain good speakers wire contacts, please tighten the screw terminals firmly.
- ⚠ For safety reason, don't defeat the grounding connection. Grounding is useful for user safety.
- Use only connectors and accessories suggested by the manufacturer. .
- This unit should be placed in a rack (see INSTALLATION) and kept far from:
  - Wet places
  - Direct exposure to heat sources (like sun light)
  - Non properly ventilated places
- Disconnect the power cord during storms or when the unit is not used.

- ⚠ In order to prevent fire and electric shock risks, it's necessary to keep the unit far from sprinkling and drops. Please don't put cups, vases or other object containing liquids over the unit. In case of interferences from source signal, THD value will raise over 10%. Don't place this unit in a bookshelf o in other places with small room.
- PROEL S.P.A. is not responsible for any damage that occurs due to a wrong unit installation.

Thank you for choosing one of Proel products, and for your confidence towards our brand, synonymous of professionalism, accuracy, high quality and reliability. All our products are CE approved and designed for continuous use in professional installation systems.

2. DESCRIPTION

AUP series amplifier has been specifically designed for paging, music, and sound reinforcement applications in P.A. systems.

FEATURES:

- Protection circuit for speaker short circuit and overload.
- INPUT1 priority over the other inputs (vocal activation).
- Manual priority of INPUT1, INPUT2, and INPUT3 over the inputs.
- LED power on indicator.
- LED level indicator.
- Volume master control.
- Discrete volume control for inputs 1 – 5.
- Bass and treble EQ controls.
- Ground connection screw.
- Four universal XLR inputs, with mic/line sensitivity selection and switchable 24 V DC phantom power.
- MAIN IN input.

- AUX RCA stereo CD/TAPE/TUNER input with selectable sensitivity.
- Four discrete outputs. Constant impedance output (4Ω) and three constant voltage outputs (25V - 70 V – 100 V).
- PRE OUT output.
- TAPE OUTPUT.
- Switchable power supply (115V – 230 V).
- Emergency 24 V DC power supply.

3. FRONT PANEL DESCRIPTION

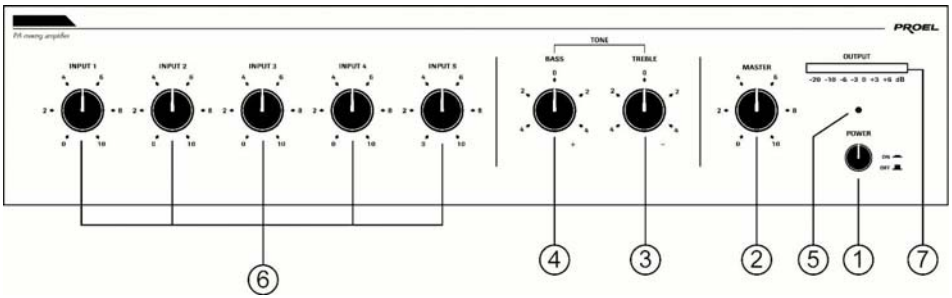

fig.1

8) POWER switch.
9) MASTER volume control.
10) TREBLE EQ control.
11) BASS EQ control.
12) LED power indicator.
13) INPUT1 - INPUT5 volume controls.
14) OUTPUT LED Vu-meter.

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4. REAR PANEL DESCRIPTION

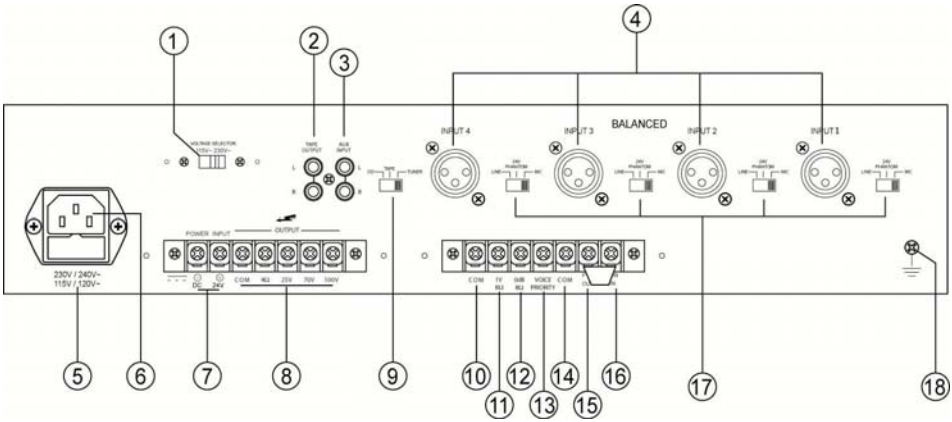

fig.2

1) AC power selector.
2) TAPE OUTPUT connectors.
3) AUX INPUT (INPUT5) connectors.
4) INPUT1 ÷ INPUT4 connectors.
5) Fuse folder.
6) IEC AC power socket.
7) DC power terminals.
8) Speaker output terminals.
9) AUX INPUT sensitivity selector.
10) COM terminal for outputs 11), and 12).
11) Output terminal for auxiliary speaker.
12) 0dB output terminal.
13) Voice priority terminal.
14) COM terminal for outputs 13), 15), and 16).
15) PRE OUT terminal.
16) MAIN IN terminal.
17) INPUT1 - INPUT4 sensitivity selector.
18) Grounding terminal.

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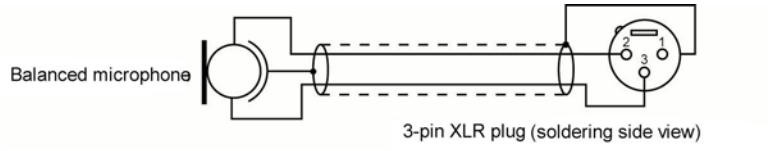
5. INSTALLATION

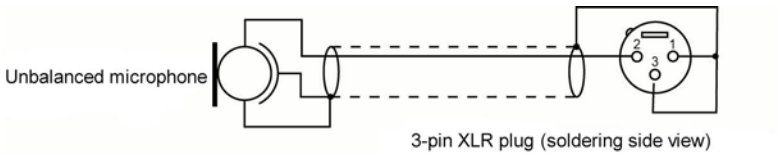
1. Inputs wiring

- INPUT1, INPUT2, INPUT3, and INPUT4 have a balanced XLR connector, useful to connect both low impedance microphones (30-600Ω), both condenser microphones with 24V phantom power supply, both line level audio sources (i.e. AM/FM tuner, cassette deck, CD player, etc.). **To choose the source to be connected, please use the following selectors position (fig. 2 ref. 17): LINE position for AM/FM tuner, CD player, Cassette deck etc., MIC position for low-impedance dynamic microphones and PHANTOM position for condenser microphones**. INPUT1 is provided of VOX feature, when a signal is detected, this input signal has priority over all the other inputs, excluding all the other input signals. In this way only INPUT1 audio signal is amplified.

⚠ Attention

- Never connect a dynamic microphone when PHANTOM power is turned on, the dynamic microphone could be damaged.
- Turn off PHANTOM power before connecting/disconnecting microphones connectors.
- Be sure that PHANTOM power is not turned on when you use microphones not requiring external power. The phantom power, applied at pin 2 and pin 3, could damage these microphones.





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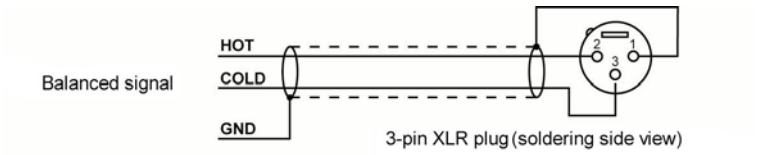
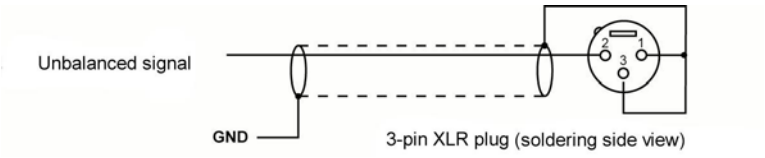
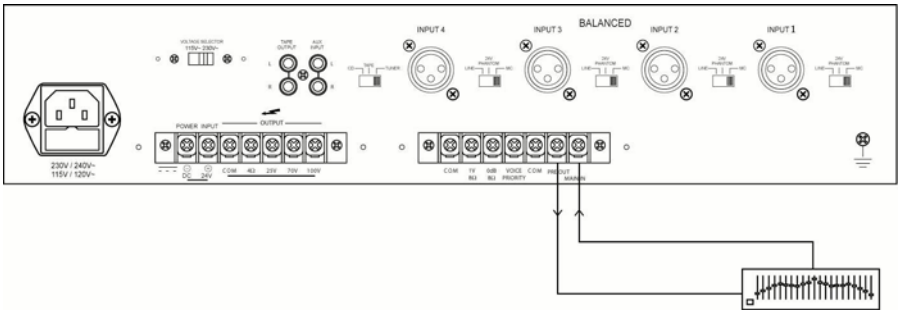




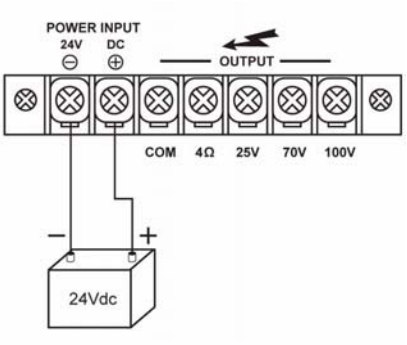
- AUX INPUT (INPUT 5).
  L e R RCA input connectors allow the input of a stereo signal by left (L) and right (R) inputs. This stereo input is useful to connect a stereo external audio source.

- MAIN IN input and PRE OUT output.

  MAIN IN input is connected to PRE OUT output by a jumper. It's possible to improve the overall sound quality inserting an external unit (i.e. equalizer, compressor etc.). For connection wiring please refer to the following picture.



- 24V DC input terminals
  These two terminals allow the unit to be DC powered by an external power source (i.e. 24V generator or battery). In case of AC power fault or black out, the unit will be powered by 24 V DC, with automatic and silent switchover to backup power.



- AC power IEC socket.
  This IEC socket is intended to connect AC linecord to the AC outlet (**fig. 2 ref. 6)**.

⚠ **Attention**
Before connecting the AC linecord to the unit, please control that AC power selector (**fig. 2 ref. 1**) matches the outlet AC power.

2. Output connections

⚠ **Attention**
To prevent the risk of electric shock, never touch amplifier outputs when the amplifier is turned on.

- Speakers connection.
  To access to the speaker connection terminals (**fig. 2 ref. 8**) remove the protection cover unscrewing the screws.

  This unit can be used both with constant impedance speakers (4Ω) and with constant voltage speakers (25V, 70V, and 100V). Make connections applying following instructions.

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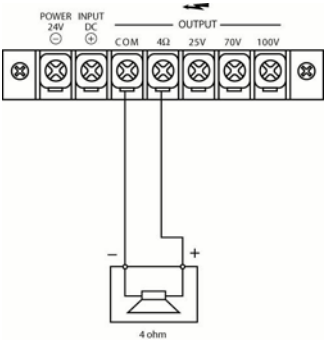
Constant impedance line.

To use this amplifier with a constant impedance line (4Ω), please connect the COM terminal to the negative post of your speaker, and connect the 4Ω terminal to the positive post.

- To obtain the best performances, the total speakers impedance connected to the line, should be equal to the amplifier output impedance.
- The speakers power sum should not be lower than the amplifier output power.
- We suggest you to don't use long cables. Anyhow, for longer distances application use a thicker cable.



Constant voltage line

If you're using a constant voltage line, connect either the 25V, 70, or 100V to the "+" side of speaker system, and connect COM to "-" side of the speaker.

- Speakers should have a transformer of the same voltage developed by the amplifier.
- Speakers power sum should not be higher than the amplifier maximum output power.

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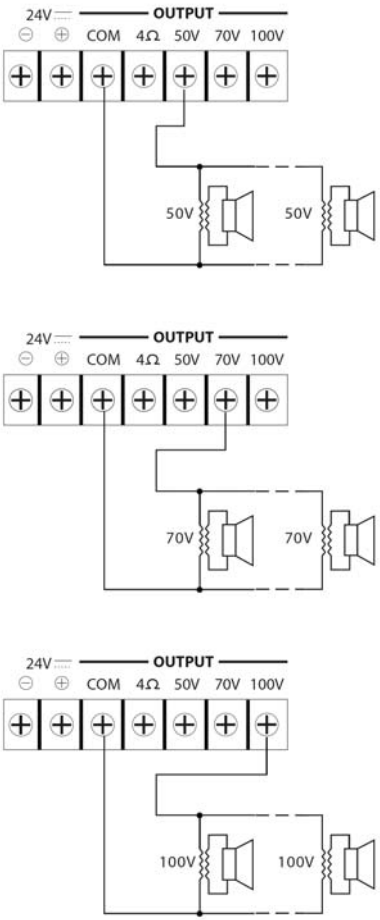


- 1W monitor output connection

  This terminal allows an 8 Ω speaker (monitor) connection, driven by the 1 W internal power internal amplifier, reproducing blended INPUT4 and AUX INPUT signals.
  - The connection is made using terminals on unit rear panel (**fig. 2 ref. 11**).

- Output signal is managed by INPUT4 and AUX INPUT volume controls only.

- 0dB output connection

  It allows the connection of blended INPUT4 and AUX INPUT signals to any external device (**fig. 2 ref. 12**).
  - Terminals may be connected to an external unit with unbalanced input, higher than 600 Ω (i.e. additional amplifier or telephone unit).
  - Output signal is set by INPUT4 and AUX INPUT volume controls only.

3. GND terminal (Unit grounding)

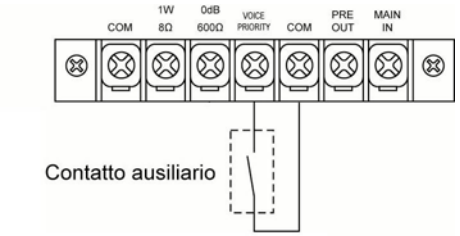
   If AC power outlet is not provided with grounding or polarization connection, this terminal allows hardware unit parts grounding (**fig.2 ref. 18**).

   ⚠ Attention
   This connection must be done by qualified personnel only.

4. COM terminals
   Please refer to **fig.2**: **10)** Common terminal for outputs **11**) and **12)**
   14) Common terminal for outputs **13)**, **15)**, **16)**

5. VOICE PRIORITY function

   When PRIORITY and COM (**fig.2 ref. 13**) terminals are in short-circuit, INPUT 4 and AUX INPUT are automatically deactivated leaving priority to INPUT1, INPUT2 and INPUT3 signals.



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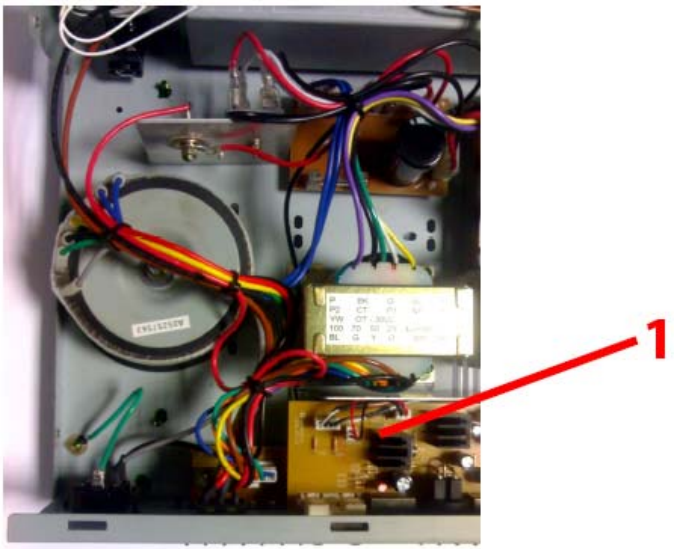
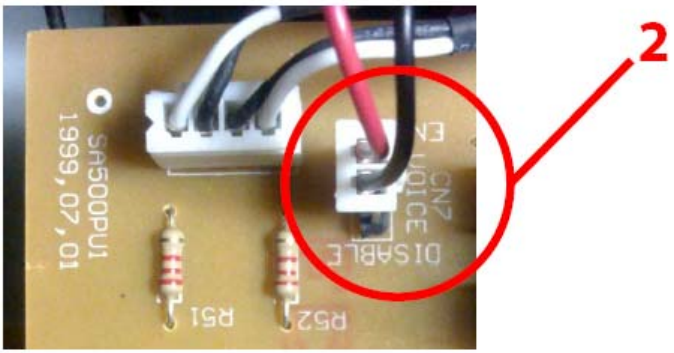
6. VOX PRIORITY function deactivation

Once removed the screws, open the cover and detect the CN7 VOICE connector (ref.2), on the board (ref.1) as showed in the following pictures:





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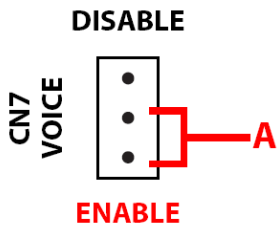
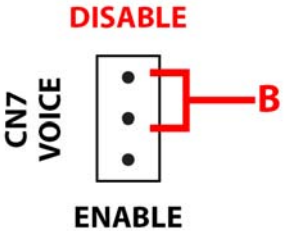
The default configuration of the CN7 connector is **A** (ENABLE): Input 1 is priority compared to all the other inputs.
For exclude the priority function, set the CN7 connector to B configuration (DISABLE): in this configuration all the 5 inputs are mixed.





6. OPERATION

- **b.** To turn on the unit press the POWER switch.
- **c.** To turn off the unit release the POWER switch.
- **d.** BASS control modifies lower frequencies output signal. Set this control level by personal taste and ambient acoustic character.
- **e.** TREBLE control modifies higher frequencies output signal. Set this control level by personal taste and ambient acoustic character.
- **f.** INPUT1, INPUT2, INPUT3, INPUT4 and AUX INPUT have their own independent volume control. These controls will allow to set the intensity of each program source, in order to obtain the desired levels.
- **g.** Turning clockwise the MASTER volume control, the listening level will raise, turning it counter clockwise it will be lower. To get the best performances MASTER volume should be set to obtain an output level between –20 dB and 0 dB, as shown by 5 lower LEDs. Make sure the two higher LEDs (+3dB and +6dB) are not lit. These LEDs will indicate that signal is distorted and that MASTER volume should be decreased.

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7. Technical specifications

Model	AMP30	AMP60	AMP120
RMS / MAX (W) output power	30/45	60/90	120/180
Constant voltage outputs	25,70,100V		
Constant impedance output	4 Ω		
Inputs connectors	INPUT 1~ INPUT 4: XLR connectors, AUX INPUT: RCA MAIN-IN: on terminal board		
Outputs connectors	4Ω: on terminal board 25, 70, 100V: on terminal board PRE OUT on terminal board TAPE OUT RCA		
Frequency response	50-15.000 Hz (±3 dB)		
Harmonic distortion	≤ 1% (1Khz @ rated output power)		
Signal to noise ratio	INPUT 1-4: ≥55 dB; AUX INPUT: ≥55 dB; MAIN-IN: ≥55 dB;		
Controls	5 volume independent control for each input – 1 MASTER output volume control - 1 TREBLE control - 1 BASS control		
Equalization	BASS: ± 10 dB @ 100 Hz; TREBLE: ±10 dB @ 10 KHz		
24V Phantom power (defeatable)	Inputs 1, 2, 3, 4		
AC power	115/230 V AC (±5%) – 50/60 Hz		
DC power	24V		
AC power consumption	90W	180W	360W
DC power consumption	6.3 A	8 A	10 A
Rack unities	2U standard 19”		
Dimensions (W x H x D)	420 mm. x 88 mm. x 280 mm. – 16.5 in. x 3.5 in. x 11 in.		
Weight	6.9 Kg. - 15.1 lbs	7.8 Kg. - 17.2 lbs	10 Kg. - 22 lbs

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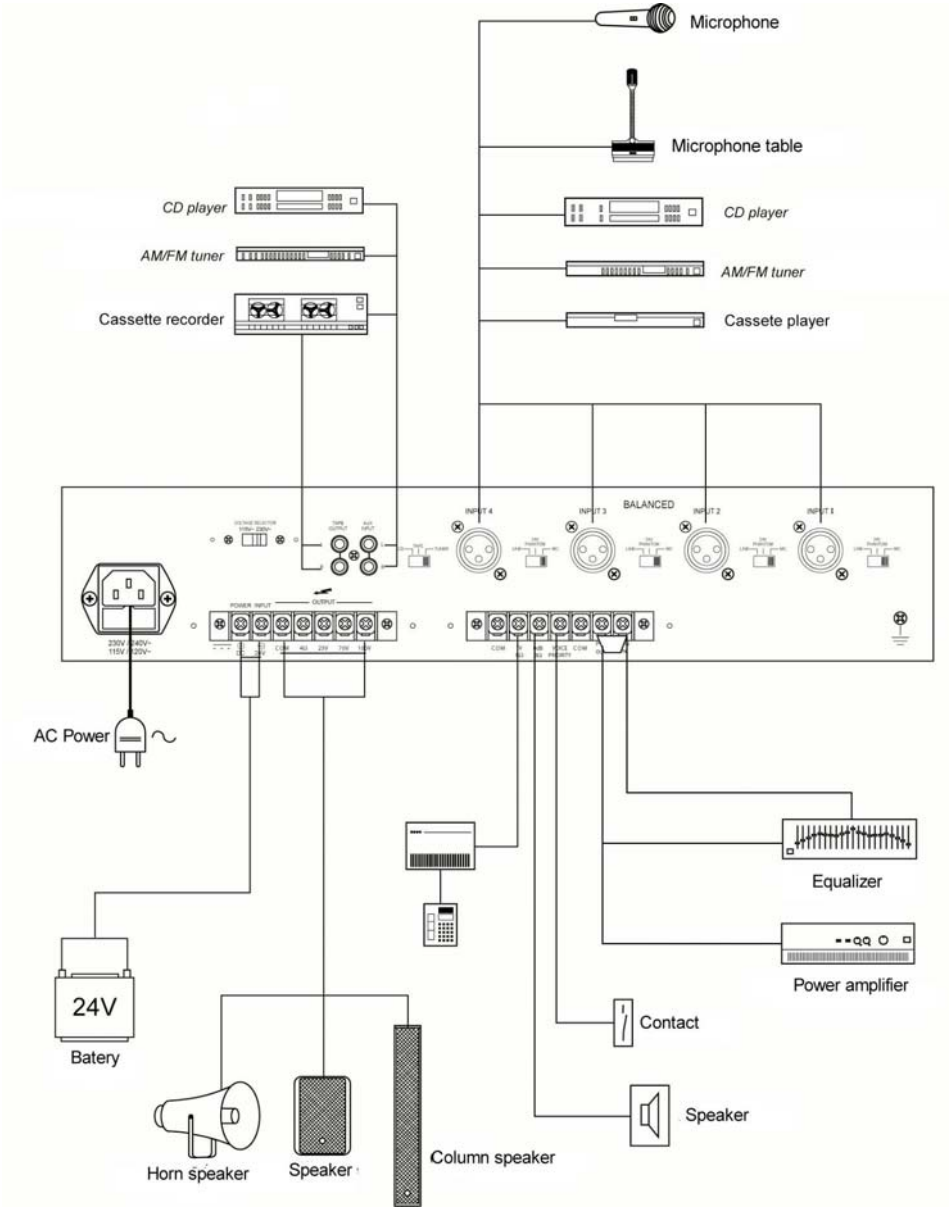
8. TYPICAL HOOKUP DIAGRAMS



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CE

The product is in compliance with Directive 89/336/EEC (Electromagnetic Compatibility) and following modifications 92/31/EEC and 93/68/EEC, as the following standards:
EN 50082-1:1997, EN 55013:1990, EN 55020:1994

it is also in compliance with Directive 73/23/EEC (Low Voltage) and following modifications 93/68/EEC, as the following standard:
EN 60065:1998

Proel SpA pursue a policy of continuous research and development. Proel SpA reserve the right to modify product circuitry and appearance at any moment, without prior notice. REV. 01 / 24-08

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